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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/518,629	03/21/2005	Ryuji Nakagawa	Q85397	3520
23373	7590	01/10/2008	EXAMINER	
SUGHRUE MION, PLLC			TOSCANO, ALICIA	
2100 PENNSYLVANIA AVENUE, N.W.				
SUITE 800			ART UNIT	PAPER NUMBER
WASHINGTON, DC 20037			1796	
			MAIL DATE	DELIVERY MODE
			01/10/2008	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/518,629

Applicant(s)

NAKAGAWA ET AL.

Examiner

Alicia M. Toscano

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 21 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/ are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 12/20/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

1. Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakagawa (JP 2000-129037, English translation provided) in view of Nakamura (US 6414073).

Nakagawa discloses rubber compositions for tires comprising 100 pts by weight, or mass, styrene-butadiene resin (A) which has a MW of  $4 \times 10^5$ - $3 \times 10^6$ , a bound styrene content of 10-50 wt% and an amount of bound vinyl butadiene moiety of 20-70% (abstract), as required by resin (A) of claim 1. The composition further comprises 10-300 parts by wt, or mass, of a hydrogenated styrene-butadiene copolymer (B), with a MW of  $5 \times 10^3$ - $2 \times 10^5$ , a bound styrene content of 25-75 wt% and 60% or greater of hydrogenated double bonds (abstract), as required by resin (B) of claim 1. The amount

of bound styrene (B) is greater than the bound styrene of (A) + 10 (abstract), as required by claim 1.

Nakagawa does not include the use of a resin having a MW of 1,000-50,000 in the rubber composition, as further required by claim 1.

Nakamura discloses pressure sensitive rubber adhesives. Said adhesives further comprise a tackifier, in order to increase the tackiness of the rubber composition. The tackifier is added in an amount ranging from 20-150 parts per 100 parts rubber and may be a terpene-phenol resin (Column 4 lines 24-34) such as YS POLYSTAR T115 (Ex 2), which is disclosed on pg 15 line 35 to be useful in Applicant's invention. Since the polymer is disclosed to be used by the Applicant it is the Examiner's position that the MW and softening point are inherent in the polymer.

It would have been obvious to one of ordinary skill in the art at the time of the invention to include in Nakagawa the use of a terpene-phenol resin tackifier, as taught by Nakamura, in order to increase the tackiness of the rubber composition.

The composition set forth above thusly meets all the limitations of claims 1, 2, 3, 4, 6, 15, 16, 17, 18 and 21. The amount of bound styrene (B) may be greater than the amount of styrene (A) + 15 (claim 6 of Nakagawa), as required by claim 5, claims 7-14 are drawn to optional components and are thusly rejected. Nakagawa further discloses the use of carbon black [0020], as required by claims 19 and 20.

2. Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakagawa in view of Sasaka (US 6186204).

Nakagawa discloses rubber compositions for tires comprising 100 pts by weight, or mass, styrene-butadiene resin (A) which has a MW of  $4 \times 10^5$ - $3 \times 10^6$ , a bound styrene content of 10-50 wt% and an amount of bound vinyl butadiene moiety of 20-70% (abstract), as required by resin (A) of claim 1. The composition further comprises 10-300 parts by wt, or mass, of a hydrogenated styrene-butadiene copolymer (B), with a MW of  $5 \times 10^3$ - $2 \times 10^5$ , a bound styrene content of 25-75 wt% and 60% or greater of hydrogenated double bonds (abstract), as required by resin (B) of claim 1. The amount of bound styrene (B) is greater than the bound styrene of (A) + 10 (abstract), as required by claim 1.

Nakagawa does not include the use of a resin having a MW of 1,000-50,000 in the rubber composition, as further required by claim 1.

Sasaka discloses rubber tire compositions. Said compositions further comprise a softener in order to increase controllability and ride comfort of the tire product (Column 7 lines 13-23). The softener is 20 parts, or more, per 100 parts of the rubber composition (Column 8 lines 66-67), wherein 5 to 55 parts by weight may be a terpene-phenol resin having a softening point of 70-130C (Column 9 lines 1-26). 55% of 20 parts is 11 parts of said terpene-phenol resin in the rubber resin, meeting the range limitations of claim 18 and the Examiner notes that use of "20 parts or more" would encompass more than 11 parts by weight terpene-phenol resin. Since the softening point meets the requirements of claim 17, and since the softening point is directly related to the

molecular weight, it is the Examiner's position that the molecular weight inherently lies within the range required in claim 1.

It would have been obvious to one of ordinary skill in the art at the time of the invention to include in Nakagawa the use of a terpene-phenol resin; as taught by Sasaka, in order to improve the controllability and ride comfort of the tire.

The composition set forth above thusly meets all the limitations of claims 1, 2, 3, 4, 6, 15, 16, 17, 18 and 21. The amount of bound styrene (B) may be greater than the amount of styrene (A) + 15 (claim 6 of Nakagawa), as required by claim 5, claims 7-14 are drawn to optional components and are thusly rejected. Nakagawa further discloses the use of carbon black [0020], as required by claims 19 and 20.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia M. Toscano whose telephone number is 571-272-2451. The examiner can normally be reached on Monday to Friday 8:30 AM to 5 PM.

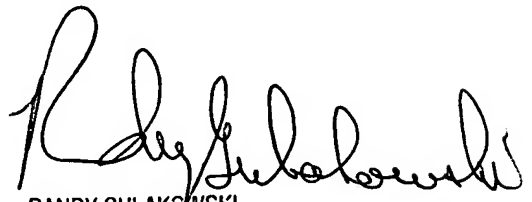
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AMT



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